RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/728,131_
Source: _1FWQ_
Date Processed by STIC: _11/9/04_

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IFWO

RAW SEQUENCE LISTING   DATE: 11/10/2004
PATENT APPLICATION: US/10/728,131   TIME: 17:57:47

          Input Set : **A:\PTO.AMC.txt**
          Output Set: **N:\CRF4\11102004\J728131.raw**

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 4 <110> APPLICANT: Neeper, Michael P.
 5        McClements, William L.
 6        Jansen, Kathrin U.
 7        Schultz, Loren D.
 8        Chen, Ling
 9        Wang, Xin-Min
11 <120> TITLE OF INVENTION: SYNTHETIC HUMAN PAPILLOMAVIRUS GENES
14 <130> FILE REFERENCE: 20413YCA
16 <140> CURRENT APPLICATION NUMBER: 10/728,131
17 <141> CURRENT FILING DATE: 2003-12-04
19 <150> PRIOR APPLICATION NUMBER: 09/642,405
20 <151> PRIOR FILING DATE: 2000-08-21
22 <150> PRIOR APPLICATION NUMBER: PCT/US00/22932
23 <151> PRIOR FILING DATE: 2000-08-21
25 <150> PRIOR APPLICATION NUMBER: 60/210,143
26 <151> PRIOR FILING DATE: 2000-06-07
28 <150> PRIOR APPLICATION NUMBER: 60/150,728
29 <151> PRIOR FILING DATE: 1999-08-25
31 <160> NUMBER OF SEQ ID NOS: 150
33 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial Sequence
40 <220> FEATURE:
41 <223> OTHER INFORMATION: Codon-Optimized HPV16 L1
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46 cgcctgctgg ccgtgggcca ccccctacttc cccatcaaga agcccaacaa caacaagatc 180
47 ctggtgccca aggtgagcgg cctgcagtac cgcgtgttcc gcatccacct gcccgacccc 240
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51 gtggacaacc gcgagtgcat cagcatggac tacaagcaga cccagctgtg cctgatcggc 480
52 tgcaagcctc ccatcggcga gcactggggc aagggcagcc cctgcaccaa cgtggccgtg 540
53 aaccccggcg actgccctcc cctggagctg atcaacaccg tgatccagga cggcgacatg 600
54 gtggacaccg gcttcggcgc catggacttc accaccctgc aggccaacaa gagcgaggtg 660
55 cccctggaca tctgcaccag catctgcaag taccccgact acatcaagat ggtgagcgag 720
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57 ttcaaccgcg ccggcgccgt gggcgagaac gtgcccgacg acctgtacat caagggcagc 840
58 ggcagcaccg ccaacctggc cagcagcaac tacttcccca ctcccagcgg cagcatggtg 900
59 accagcgacg cccaaatctt caacaagccc tactggctgc agcgcgccca gggccacaac 960
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 62 aaggagtacc tgcgccacgg cgaggagtac gacctgcagt tcatcttcca gctgtgcaag 1140
 63 atcaccctga ccgccgacgt gatgacctac atccacagca tgaacagcac catcctggag 1200
 64 gactggaact tcggcctgca gccccctccc ggcggtaccc tggaggacac ctaccgcttc 1260
 65 gtgaccagcc aggccatcgc ctgccagaag cacacccctc ccgctcccaa ggaggatccc 1320
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 67 cagttccccc tgggccgcaa gttcctgctg caggccggcc tgaaggccaa gcccaagttc 1440
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 69 aagaagcgca agctgtaa                                                  1518
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 87 acccagcaga tgctgcaggt ggagggccgc cacgagaccg agaccccctg cagccagtac 480
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 97 cagcgccaga ccgtgctgca gcacagcttc aacgactgca ccttcgagct gagccagatg 1080
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110 gtgtacgagc tgaacgacaa gaactggaag agcttcttca gccgcacctg gagccgcctg 1860
111 agcctgcacg aggacgagga caaggagaac gacggcgaca gcctgcccac cttcaagtgc 1920
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117 <213> ORGANISM: Artificial Sequence
119 <220> FEATURE:
120 <223> OTHER INFORMATION: Mutant, Codon-Optimized HPV16 E2
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125 gccatctact acaaggcccg cgagatgggc ttcaagcaca tcaaccacca ggtggtgccc 180
126 accctggccg tgagcaagaa caaggccctg caggccgccg agctgcagct gaccctggag 240
127 accatctaca acagccagta cagcaacgag aagtggaccc tgcaggacgt gagcctggag 300
128 gtgtacctga ccgcccccac cggctgcatc aagaagcacg gctacaccgt ggaggtgcag 360
129 ttcgacggcg acatctgcaa caccatgcac tacaccaact ggacccacat ctacatctgc 420
130 gaggaggcca gcgtgaccgt ggtggagggc caggtggact actacggcct gtactacgtg 480
131 cacgagggca tccgcaccta cttcgtgcag ttcaaggacg acgccgagaa gtacagcaag 540
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133 agcagcaacg aggtgagcag ccccgagacc atccgccagc acctggccaa ccacagcgcc 660
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136 agcgtggaca gcgcccccat cctgaccgcc ttcaacagca gccacaaggg ccgcatcaac 840
137 tgcaacagca acaccacccc catcgtgcac ctgaagggcg acgccaacac cctgaagtgc 900
138 ctgcgctacc gcttcaagaa gcactgcaag ctgtacaccg ccgtgagcag cacctggcac 960
139 tggaccggcc acaacgtgaa gcacaagagc gccatcgtga ccctgaccta cgacagcgag 1020
140 tggcagcgcg accagttcct gagccaggtg aagatcccca agaccatcac cgtgagcacc 1080
141 ggcttcatga gcatctaa                                                 1098
143 <210> SEQ ID NO: 4
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145 <212> TYPE: DNA
146 <213> ORGANISM: Artificial Sequence
148 <220> FEATURE:
149 <223> OTHER INFORMATION: Mutant, Codon-Optimized HPV16 E7
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154 cccgccggcc aggccgagcc cgaccgcgcc cactacaaca tcgtgacctt ctgctgcaag 180
155 tgcgacagca ccctgcgcct gtgcgtgcag agcacccacg tggacatccg caccctggag 240
156 gacctgctga tgggcaccct gggcatcgtg tgccccatct gcagccagaa gccctaa     297
158 <210> SEQ ID NO: 5
159 <211> LENGTH: 297
160 <212> TYPE: DNA
161 <213> ORGANISM: Artificial Sequence
163 <220> FEATURE:
164 <223> OTHER INFORMATION: Codon-Optimized HPV6a E7
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168 gtgggcctgc actgctacga gcagctggtg gacagcagcg aggacgaggt ggacgaggtg 120
169 gacggccagg acagccagcc cctgaagcag cacttccaga tcgtgacctg ctgctgcggc 180
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170 tgcgacagca acgtgcgcct ggtggtgcag tgcaccgaga ccgacatccg cgaggtgcag 240
171 cagctcctgc tgggtaccct gaacatcgtg tgccccatct gcgctcccaa gacctaa    297
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174 <211> LENGTH: 318
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176 <213> ORGANISM: Artificial Sequence
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184 atcgacggcg tgaaccacca gcacctgccc gctcgcaggg ccgagcccca cgccacacc     180
185 atgctgtgca tgtgctgcaa gtgcgaggcc cgcatcgagc tggtggtgga gagcagcgct    240
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187 tgcgccagcc agcagtaa                                                  318
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190 <211> LENGTH: 1107
191 <212> TYPE: DNA
192 <213> ORGANISM: Artificial Sequence
194 <220> FEATURE:
195 <223> OTHER INFORMATION: Codon-Optimized HPV6a E2
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214 tgggccagca gcaaggctcc ccacaagcac gccatcgtga ccgtgaccta cgacagcgag 1020
215 gagcagcgcc agcagttcct ggacgtggtg aagatccctc ccaccatcag ccacaagctg 1080
216 ggcttcatga gcctgcacct gctgtaa                                       1107
218 <210> SEQ ID NO: 8
219 <211> LENGTH: 1098
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223 <220> FEATURE:
224 <223> OTHER INFORMATION: Codon-Optimized HPV18 E2
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230 caggtggtgc ccgcctacaa catcagcaag agcaaggccc acaaggccat cgagctgcag 240
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237 aacgacagca tgtgcagcac cagcgacgac accgtgagcg ccacccagct ggtgaagcag 660
238 ctgcagcaca ctcccagccc ctacagcagc accgtgagcg tgggcaccgc caagacctac 720
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241 ctgtgcagcg gcaacaccac tcccatcatc cacctgaagg gcgaccgcaa cagcctgaag 900
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243 cactggaccg gcgccgggaa cgagaagacc ggcatcctga ccgtgaccta ccacagcgag 1020
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245 ggctacatga ccatgtaa                                               1098
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249 <212> TYPE: DNA
250 <213> ORGANISM: Artificial Sequence
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253 <223> OTHER INFORMATION: Codon-Optimized HPV16 L1 fragment
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265 <220> FEATURE:
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274 <211> LENGTH: 129
275 <212> TYPE: DNA
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278 <220> FEATURE:
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284 tgccctccc                                                          129
286 <210> SEQ ID NO: 12
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VERIFICATION SUMMARY　　　　　　　　　DATE: 11/10/2004
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